

Patent claims

1. A suction or blow roll for a machine for producing
and/or finishing a paper, board, tissue or another
5 fibrous web (2), having a rotatable perforated
roll shell (1) and at least one pressure region
(9) which extends over only part of the roll
circumference and is formed by a stationary
pressure box (6) in the interior of the roll which
10 is open toward the roll shell (1), the pressure
box (6) being connected to a negative or positive
pressure source and being sealed off with respect
to the roll shell (1) by at least one sealing
element (7), characterized in that, at least on
15 one sealing element (7), at least an at least
substantially air-impermeable cover (5, 10)
running in the circumferential direction and
arranged outside the pressure box (6) and/or the
roll shell (1) adjoins or is arranged in the
20 vicinity of a side wall of the at least one
pressure box (7) on the outer side of the roll
shell (1), the cover (5, 10) either being in
contact with the roll shell (1) or having a
spacing of less than 100 mm from the latter.
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2. The suction or blow roll as claimed in claim 1,
characterized in that the distance between the
cover (5, 10) and the roll shell (1) is less than
20 mm, preferably less than 10 mm.
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3. The suction or blow roll as claimed in claim 1 or
2, characterized in that the distance between the
cover (5, 10) and the roll shell (1) is
substantially the same everywhere.
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4. The suction or blow roll as claimed in claim 1 or
2, characterized in that the distance between the

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roll shell (1) and the cover (5, 10) increases or decreases away from the pressure box (6).

- 5 5. The suction or blow roll as claimed in claim 1 or 2, characterized in that the distance between the roll shell (1) and the cover (5, 10) fluctuates in the longitudinal and/or transverse direction of the machine.
- 10 6. The suction or blow roll as claimed in one of the preceding claims, characterized in that the cover (5, 10) adjoins a sealing element (7) running approximately transversely with respect to the web running direction (4).
- 15 7. The suction or blow roll as claimed in one of the preceding claims, characterized in that a cover (5, 10) adjoins the end of the pressure box (6) located in the direction of rotation.
- 20 8. The suction or blow roll as claimed in one of the preceding claims, characterized in that a cover (5, 10) adjoins the end of the pressure box (6) located counter to the direction of rotation.
- 25 9. The suction or blow roll as claimed in one of the preceding claims, characterized in that the cover (5, 10) extends over a circumferential region of at least 10 mm, preferably at least 100 mm and in particular more than 200 mm.
- 30 10. The suction or blow roll as claimed in one of the preceding claims, characterized in that the cover (5, 10) extends in the circumferential direction over the entire region located outside the pressure box (6).
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11. The suction or blow roll as claimed in one of the preceding claims, characterized in that the cover (5, 10) extends axially at least over the entire perforated region of the roll shell (1).
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12. The suction or blow roll as claimed in one of claims 1 to 10, characterized in that the cover (5, 10) extends axially over only part of the perforated region of the roll shell (1).
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13. The suction or blow roll as claimed in one of claims 1 to 12, characterized in that there is an adjusting device (17, 18), by means of which a cover (5, 10) can be varied axially over its entire width or over part of its width with respect to its distance or its angle of attack in relation to the roll shell (1).
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14. The suction or blow roll as claimed in claim 13, characterized in that the adjusting device (17, 18) can be adjusted hydraulically, pneumatically or mechanically.
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15. The suction or blow roll as claimed in claim 13 or 14, characterized in that there is a controller which, depending on a controlled variable measured by a measuring device, acts via a signal variable on the adjusting device (17, 18), which changes the position of a cover (5, 10) in accordance with the signal variable.
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16. The suction or blow roll as claimed in one of claims 1 to 15, characterized in that the cover (5, 10) has a straight, curved, undulating, zigzag or irregularly broken terminating edge.
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17. The suction or blow roll as claimed in one of claims 1 to 16, characterized in that a cover (5, 10) has openings.
- 5 18. The suction or blow roll as claimed in one of claims 1 to 17, characterized in that, between the roll shell (1) and a cover (5, 10) there are arranged spacers (13, 14, 15, 16), in particular in the form of rods, wedges or strips, which can
10 in particular be adjusted by the adjusting device (17, 18).
19. The suction or blow roll as claimed in one of claims 1 to 18, characterized in that a cover (5,
15 10) consists of a single material or of a plurality of materials, in particular of a metal, a plastic and/or a composite material.